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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/091,066	03/05/2002	Gunther O. Schenck	F0217	6716

7590 09/05/2003

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EXAMINER

TOOMER, CEPHIA D

ART UNIT

PAPER NUMBER

1714

DATE MAILED: 09/05/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/091,066	SCHENCK, GUNTHER O.	
	Examiner	Art Unit	
	Cephia D. Toomer	1714	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 July 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) ^{11/13} 10-20 and 22-27 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) ^{11/13} 10-20 and 22-27 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____. | 6) <input type="checkbox"/> Other: _____. |

DETAILED ACTION

This Office action is in response to the after final filed July 24, 2003 in which claims 1, 2, 5-9, 12, 21 and 28 were canceled and claims 13, 14, and 22 were amended.

The rejection of the claims over 35 USC 112, first paragraph is withdrawn in view of the amendment to the claims.

The rejection of claim 1 under 35 USC 103(a) as being unpatentable over Pilipski is withdrawn in view of Applicant canceling claim 1.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 13-16 and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yamazaki (US 5,436,516) in view of Johnssen (US 5,707,762).

Yamazaki teaches that men have compensated for insufficient heat in cold nights and winters, i.e., when there is only an insufficient supply of solar energy, by converting the energy stored in nature into a convenient form for use by a chemical means such as combustion. More specifically, firewood and the charcoal resulting therefrom are storage devices in the form of

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plant bodies which store the solar energy therein by photosynthesis (see col. 1, lines 14-28).

Yamazaki fails to teach that the charcoal is converted into synthesis gas.

However, Johnssen teaches that coal, which encompasses charcoal, is converted into a synthesis gas (see col. 2, lines 5-11).

It would have been obvious to one of ordinary skill in the art to have used the stored portion of charcoal to produce synthesis gases (H, CO, CO₂) because Johnssen teaches that the process of producing synthesis gas from coal has been known for sometime.

Yamazaki fails to teach that the charcoal is stored in a subterranean cavity.

However, it appears as though no patentable distinctness results from storing charcoal in a subterranean cavity versus storing it in a container above ground. Moreover, irrespective of where the charcoal is located prior to combustion, the method of storing solar energy in the charcoal is the same. Unless unexpected results occur from storing charcoal in a subterranean cavity, the claims are obvious.

3. Claims 10, 11, 17-20 and 23-27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yamazaki in view of Johnssen as applied to claims above, and further in view of Kobayashi (US 4,272,322).

Yamazaki and Johnssen have been discussed above. They fail to teach that the coal is stored under inert conditions (CO₂). Kobayashi teaches carbon dioxide is produced upon dry distillation of charcoal.

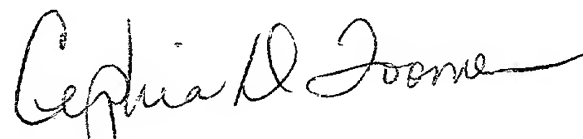
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It would be obvious to one of ordinary skill in the art to store the charcoal under inert conditions to reduce exposure to the environment, such as rain and wind, and it would have been obvious to use carbon dioxide as the inert gas because carbon dioxide is one of the gases that is produced when charcoal is formed and would not adversely affect the charcoal.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Cephia D. Toomer whose telephone number is 703-308-2509. The examiner can normally be reached on Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vasu Jagannathan can be reached on 703-306-2777. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.



Cephia D. Toomer
Primary Examiner
Art Unit 1714

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